breakout ABSTRACT

TITLE
GEO TOOLS

TRACK
Network Sustainability

SUMMARY
Two geo tools will be presented and demonstrated. One is Spatial OLAP Visualization and Analysis Tool (SOVAT) developed at the University of Pittsburgh. This novel and innovative system combines two core technologies: on-line analytical processing (OLAP) and geospatial information system (GIS). A system like this does not exist in the field of public health informatics. The purpose of SOVAT is to provide researchers with an easy-to-use, yet powerful tool for public health analysis that allows them to answer complex numerical-spatial problems. SOVAT is a turnkey system that is developed from the ground up to support numerical-spatial analytical tracking. SOVAT has a small footprint, yet is capable of handling very large amount of data since it uses data warehouse/OLAP engine for managing the data. SOVAT requires minimal support and is relatively inexpensive to deploy.

The other geo tool that will be presented is GeoDa, free exploratory spatial data analysis software that can be used in linking and analyzing ecologic data of the type typically encountered in EPHTN studies. This includes mapping and geo visualization of rates, rate smoothing, calculation of spatial weights, calculation of spatial autocorrelation, space-time relationships, spatial data manipulation, and spatial modeling of spatial multivariate data that include socioeconomic data in addition to hazard/exposure and health data. GeoDa is a powerful MS Windows based exploratory spatial data analysis software package based on ESRI map objects and is completely free.

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